REMARKS

Claims 1-12, 23, 24, and 33-49 are all the claims pending in the application. Claims 13-22 and 25-32 have been canceled without prejudice or disclaimer to pursuit in divisional applications. New claims 33-49 have been added to further define the invention. Reconsideration and allowance of all the claims are respectfully requested in view of the following remarks.

Personal Interview

Applicants thank Examiner Flores-Sánchez and Supervisor Allan Shoap for the courtesy extended to their attorney Mr. Jeffrey Schmidt, during the personal interview conducted on June 3, 2004. The Examiner's Interview Summary record includes that discussed at the June 3 Interview. No further summary is believed to be necessary.

Election/Restriction

The Examiner has withdrawn claims 4-9, 13-22, and 25-32, from further consideration as being drawn to a non-elected species. Applicants have canceled claims 13-22 and 25-32 without prejudice or disclaimer to pursuit in a divisional application. New claims 33-49 have been added to further define the invention.

New claims 33, 36, and 44 are directed to a slide feature as embodied in Figs. 43-46, and as in original claim 25. Thus, claims 33, 36 and 44, do not read on elected Species I, Figs. 8-18. Although Figs. 43-46 are not elected, new claims 33, 36, and 44, are dependent upon claims directed to the elected species of Figs. 8-18. Further, claims 4-9 now also are dependent upon claim 1 directed to the elected species of Figs. 8-18. Therefore, upon the allowance of independent claims 1, 34, and 42, Applicants request rejoinder and allowance of dependent claims 4-9, 33, 36, and 44.

New claims 34, 35, 42, and 43, are generic to various embodiments of the invention, including that in Figs. 8-18 and, therefore, should be examined with elected Species I.

New claims 37-41 correspond to original claims 2, 3, and 10-12, respectively, as do new claims 45-49 and, therefore, these new claims should also be examined with the claims readable on elected Species I.

New Claims

New claims 34 and 42 use the phrase "at least a portion of the laser light". This phrase is supported by the original specification at least as follows.

Original claim 1 defines that at least a portion of the laser light is directed onto a position to be cut on a workpiece directly beneath the blade. This is described on page 21, lines 2-6 in the specification. In addition, considering the description of page 21, line 15 to page 22, line 2, it is clear that all of the laser light is not always directed to the cutting position on the workpiece.

Specification

The Examiner objected to the disclosure as including informalities. Specifically, the Examiner asserted that on page 22, line 25, "within in" is improper. Accordingly, Applicants have deleted "in" from this phrase. Applicants have also corrected another informality on page 6.

Claim Rejections - 35 U.S.C. § 102

The Examiner rejected claims 1-3 and 10-12 under §102(b) as being anticipated by US Patent 5,285,708 to Bosten et al. (hereinafter Bosten). Applicants respectfully traverse this rejection because Bosten fails to disclose every element as set forth in the claims.

Claim 1 sets forth a cutter comprising: a cutter blade portion including a movable blade; and a laser generator for emitting laser light, the laser generator being attached to one of a holder and the cutter blade portion in an orientation so as to direct at least a portion of the laser light onto a position on the workpiece so that laser light is directly beneath the moving blade with respect to the cutter blade portion in an upper position.

For example, as shown in Figs. 6a, b, and 8, one embodiment of a cutter consistent with that set forth in claim 1 comprises a cutter blade portion 20 and a laser generator 41 for emitting

laser light L1, the laser generator 41 being attached to one of a holder 10 and the cutter blade portion 20 in an orientation to direct at least a portion of the laser light L1 onto a position on the workpiece M so that laser light is directly beneath the moving blade 22 with respect to the cutter blade portion in an upper position.

With this arrangement, a desired position to cut the workpiece can be indicated even if the position is directly beneath the cutting blade, as shown in Figs. 6a and b.[1] That is, when cutting a workpiece, the moving blade can drop onto the position of the laser light. Accordingly, when the laser light is aligned with a mark as drawn by a user, the moving blade easily can be made to remove the user's mark, thereby enhancing the appearance of goods made by pieces cut with the cutter.

Additionally, without misunderstanding, the cutting position of the saw can be known before cutting. That is, in the presently claimed invention, because the laser light is directly beneath the moving blade, the user can always know the position of the saw cut. On the other hand, wherein a saw blade is adjacent to a laser mark as in Bosten, the user must remember to which side of the saw blade the laser light falls, which results in possible confusion for the user and reduced accuracy of the cut position.

In contrast to that set forth in claim 1, and as noted above, Bosten discloses a miter saw having a laser generator, wherein the laser generator is disposed so as to make an optical alignment mark 12 at a position on either side of the blade 36. Note col. 2, lines 1-14, wherein Bosten sets forth that the optical system is disposed so as to project "a planar beam of light past one side of the blade and onto the workpiece ..." Also, note col. 3, lines 31-56, wherein Bosten sets forth that the light projection system 56 is mounted so as to make a mark 12 that is "substantially parallel to the blade". Further, note col. 5, lines 27-45, wherein Bosten sets forth that the light is at least partially obstructed by the blade so that the edges of the blade may be detected. That is, it is impossible to align the laser light with the interior of the left or right edges

[1] Specification at page 7, 3rd full paragraph.

of the blade as in Figs. 6a, 6b of the present specification.[2] Accordingly, Bosten fails to disclose a laser generator disposed in the manner set forth in claim 1.

For at least any of the above reasons, Bosten fails to anticipate claim 1. Likewise, this reference fails to anticipate dependent claims 2, 3, and 10-12. However, Applicants submit that Bosten fails to anticipate claims 3 and 10 for the following additional reasons as well.

Claim 3 sets forth a cutter comprising a laser generator, a laser generator support member, and means for moving the light emitting portion of the laser generator in the horizontal direction, wherein the moving means comprises a screw member screwingly abutting against a side of the laser generator, and a resilient member between a second side of the laser generator and the support member so as to urge the laser generator toward the screw member.

For example, as shown in Figs. 12 and 13, one embodiment consistent with that set forth in claim 3 comprises a laser generator 41, a laser generator support member 40, and means for moving the light emitting portion of the laser generator in the horizontal direction, wherein the moving means comprises a screw member 42 screwingly abutting against a side of the laser generator, and a resilient member 43 between a second side of the laser generator 41 and the support member 40 so as to urge the laser generator 41 toward the screw member 42. With such an arrangement, the position where the laser light L1 falls incident on the workpiece M can be minutely adjusted. See, for example: the paragraph bridging pages 21 and 22; and page 24, 2nd full paragraph.

In contrast to that set forth in claim 3, Bosten discloses "push knobs" 68, 70 that, when pushed, move the light projection system 56 in the direction L. The projection system 56 can be pushed to either the right or left until it engages end stops 72, 74, so that the alignment marker 12 may be located on either side of the blade 36. See Bosten at col. 4, lines 19-29 and col. 5, lines 11-26. In this regard, Bosten does not disclose any screw member, or resilient member that urges the projection system toward the screw member.

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[2] Specification at page 5, line 14 - page 6, line 9.

Claim 10 sets forth a resilient body for urging the laser generator in a vertical direction, as opposed to a frontward and rearward direction that is in the direction of the laser emission. For example, as shown in Fig. 13, a resilient body 44 urges the laser generator 41 in a vertical direction (up and down as shown in Fig. 13), wherein the laser light is emitted in a direction out of the page. Claim 11 sets forth that the frontward and rearward directions are those regarding the laser beam emitting direction.

In contrast to that set forth in claim 10, Bosten discloses a resilient spring 126 that urges the projection system 56 in the direction in which the optical alignment marker 12 is generated. For example, as shown in Fig. 3, the up-and-down direction. Accordingly, Bosten does not disclose a resilient body for urging the laser in a vertical direction.

In as much as the Examiner may attempt to apply this rejection to new claim 34, Applicants respectfully submit that Bosten fails to disclose all the elements as set forth and arranged therein. Claim 34 sets forth a cutter comprising: a cutter blade portion adapted for supporting a blade that cuts a workpiece, the blade having a rotation axis and a blade edge in a circumferential direction of the blade, the blade edge having a width in a direction of the rotation axis, the width bounded by two planes; and a laser generator for emitting laser light, the laser generator being attached to one of a holder and the cutter blade portion to direct the laser light onto a position to be cut on a workpiece while satisfying the following conditions:

(1) the laser light travels within a space defined between the two planes; and

(2) the laser light travels between the blade edge and the base when the cutter blade portion is in the upper position.

Similarly to claim 1, the laser alignment mark will appear on a workpiece at a position which will be cut by the blade when the cutter blade portion is moved from its upper position to its lower position. The arrangement of claim 34 has similar advantages as discussed above in connection with the arrangement of claim 1. In contrast to that in claim 34, Bosten discloses an arrangement wherein a laser alignment mark is positioned adjacent to a cutting blade in its width direction.

For at least any of the above reasons, Bosten fails to anticipate claim 34. Likewise, Bosten fails to anticipate dependent claims 35-41.

Allowable Subject Matter

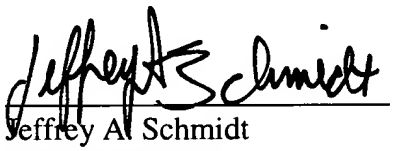
Applicants thank the Examiner for indicating that claims 23 and 24 are allowed.

Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



Jeffrey A. Schmidt
Registration No. 41,574

SUGHRUE MION, PLLC
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

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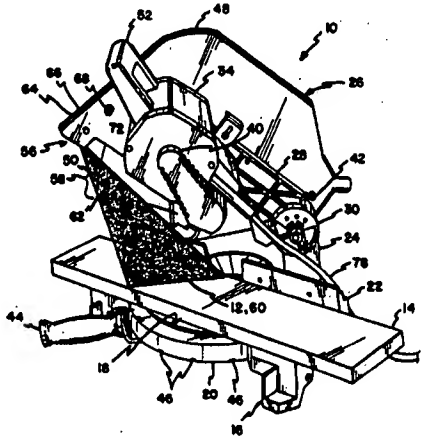
23373
CUSTOMER NUMBER

Date: June 17, 2004

Differences from the Cited Patent

Cited Patent



Cited Patent US 5,285,708

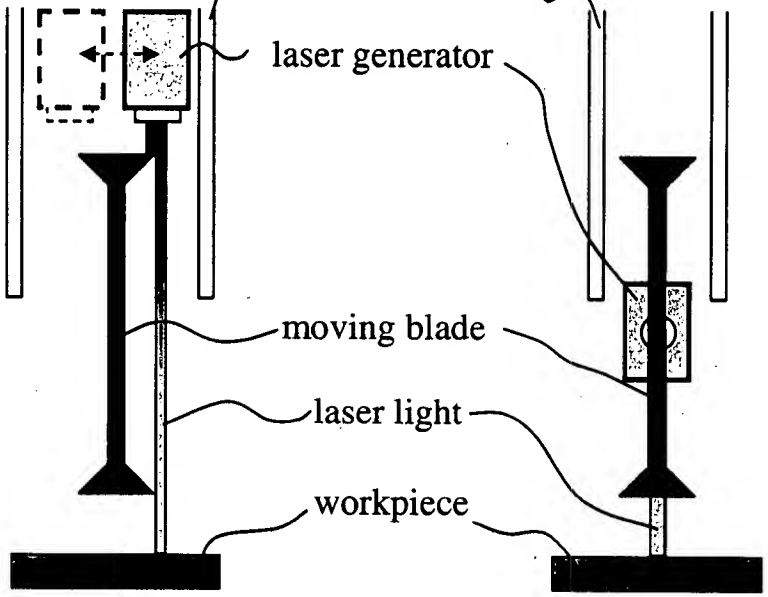
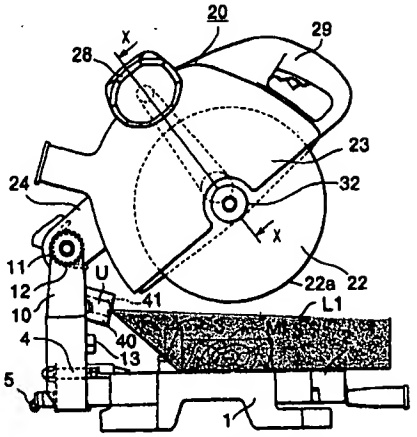


Figure of image

Figure of image

This Invention



Appl, No.:09/930,442

Original Claim

~ laser light onto a position position on the workpiece that is **directly beneath the <u>cutter blade portion</u>** with respect to the cutter blade portion in the upper position.

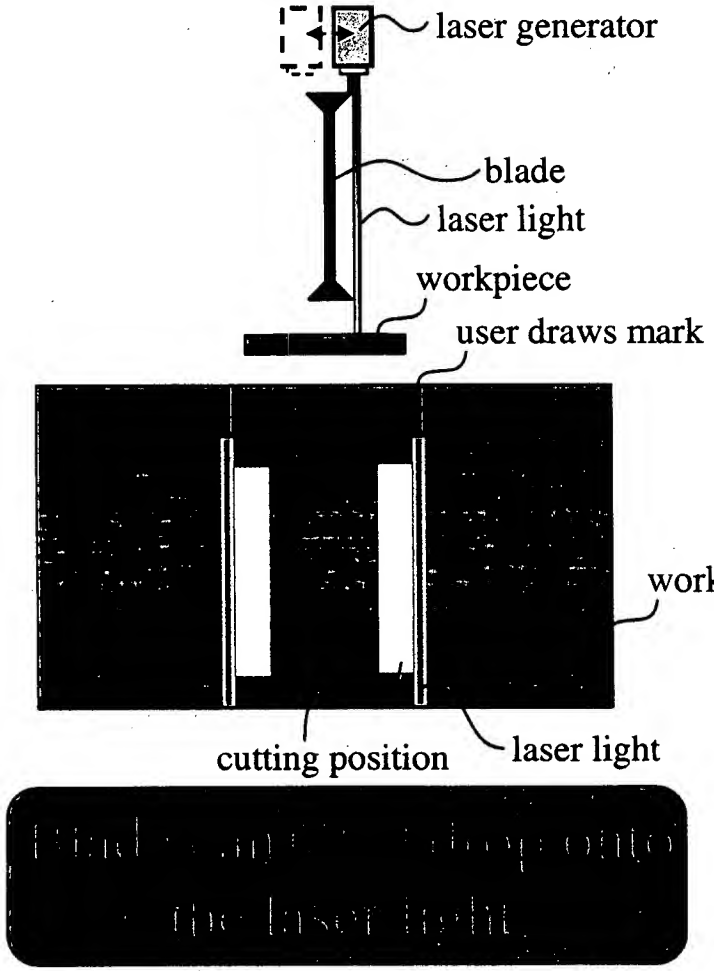
● Proposed Amendment A

directly beneath the <u>moving blade</u>

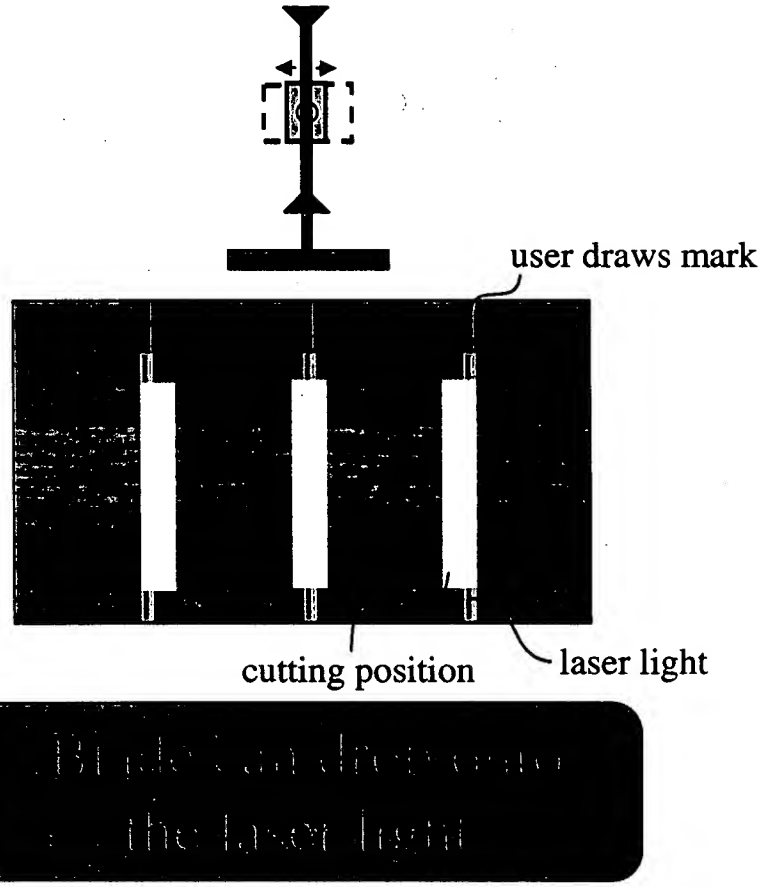
Differences from the Cited Patent

- **Difference between the cited patent and this invention**

Cited Patent



This Invention

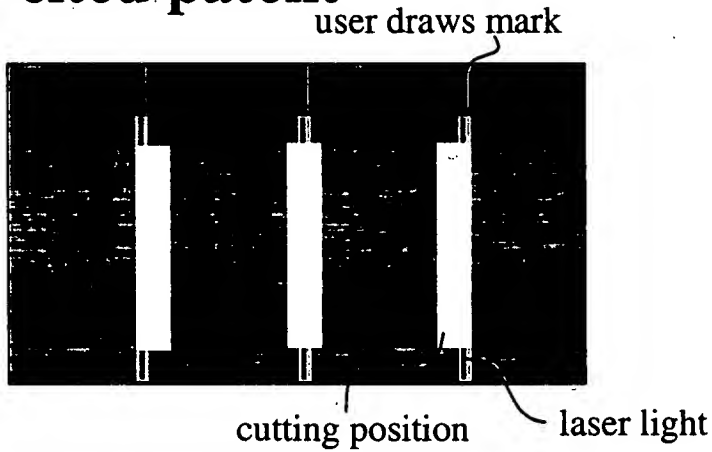


Differences from the Cited Patent

● Advantage of this invention over cited patent

Blade can drop onto the laser light.

● User can know the cutting position before cutting.



Therefore, User can cut easily.(= Without misunderstanding.)

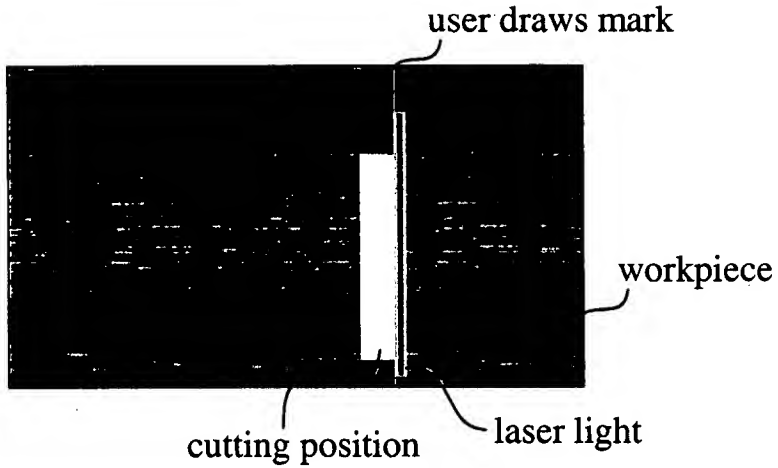
● User can cut a mark.

There is no mark on the workpiece after cutting.

The appearance of house, furniture and so on which are made from this workpiece is good-looking.

Differences from the Cited Patent

● About the cited art



For example, in the cited art,
in order to align the cutting
position with the mark
the workpiece must be
displaced to positively displace
the mark from the laser light.

cf : left figure

However it is rather difficult to
provide optimum gap between the mark and laser light.

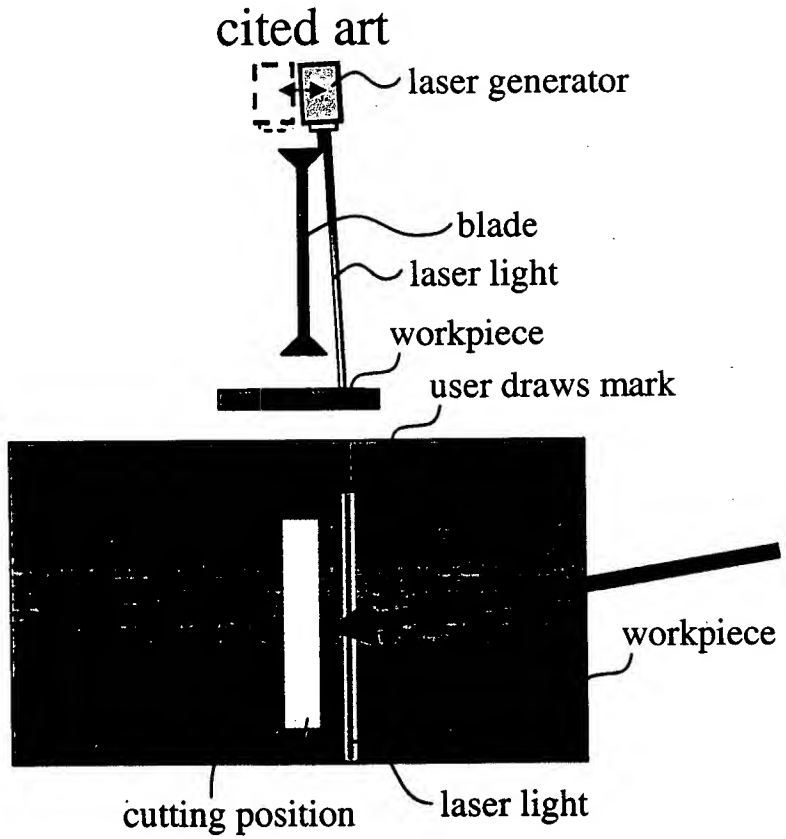
Because, width of the laser light is vague and unstable.

ex. Black wood : narrow Bright : narrow
White wood : wide Dark : wide

Differences from the Cited Patent

- **Demerit of the cited art**

When the laser light is not parallel to the side of the blade…



The laser light is displaced from the cutting position.